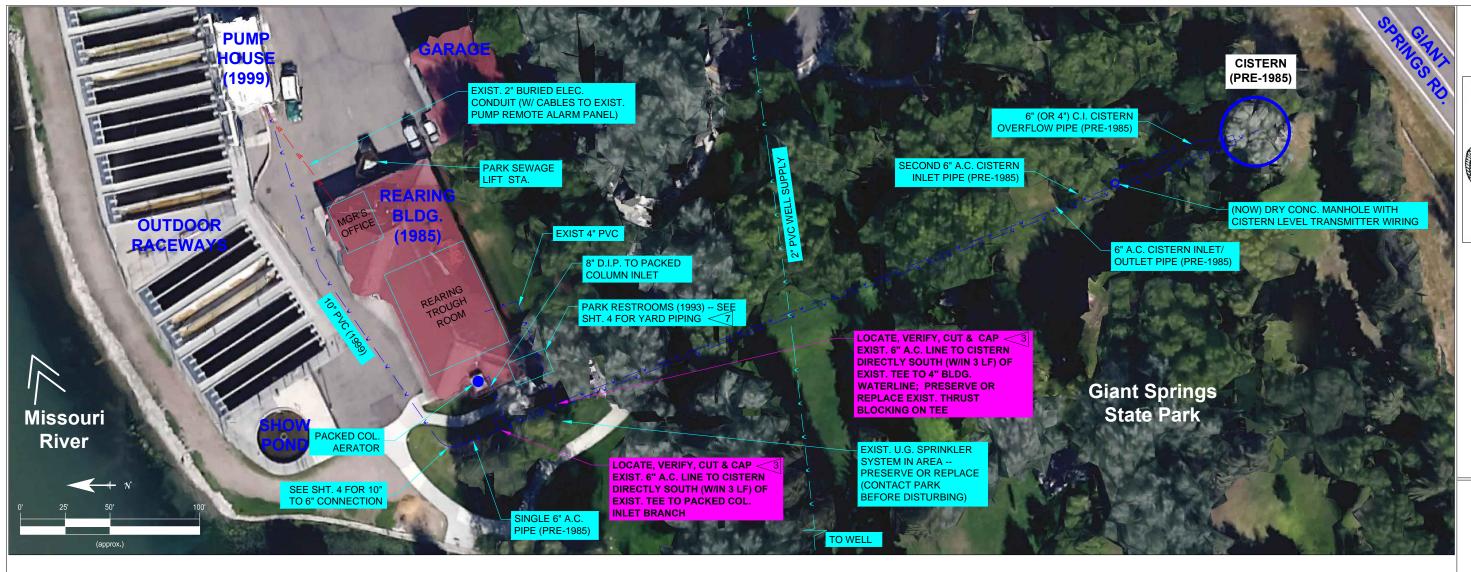
sheet 3 of 13

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Beard.

Alden G. I 24, 2019



NOTES:

- 1. EXIST. BURIED PIPING LOCATIONS INCLUDING VALVES AND FITTINGS ARE POORLY DOCUMENTED AND SHOULD BE CONSIDERED UNKNOWN. USE EXPLORATORY EXCAVATION TO LOCATE, AND CONFIRM SIZE AND DEPTH AND DIMENSIONS OF ALL EXIST. LINE BEFORE MAKING ANY MODIFICATIONS.
- 2. EXIST. 1985 AND 1999 CONSTRUCTION DRAWINGS EXCERPTS SHOWN SHOULD ONLY BE CONSIDERED APPROXIMATE, AND ARE NOT VERIFIED (FULL 1985 AND 1999 PLANS AVAILABLE ON REQUEST).
- 3. WHEN EXPOSING, CUTTING, AND COUPLING ONTO EXIST. ASBESTOS-CEMENT (A.C.) LINES, OBSERVE ALL SAFETY AND PERSONAL PROTECTION MEASURES MANDATED BY O.S.H.A., E.P.A., AND M.D.E.Q. HANDLE, CONTAIN, TRANSPORT, AND DISPOSE OF ALL ASBESTOS CEMENT PIPE PIECES, CUTTINGS, AND FRAGMENTS IN FULL ACCORDANCE WITH O.S.H.A. AND E.P.A. STANDARDS. [CONTACT GREG KURVINK, MDEQ ASBESTOS SPECIALIST, AT gkurvink@mt.go OR ph: 406/444-1346 WITH QUESTIONS.] CONTRACTOR SHALL ARRANGE FOR LANDFILL DISPOSAL OF ASBESTOS DEBRIS WITH A LANDFILL ACCEPTING SAME, AND COMPLY WITH LANDFILL'S FULL REQUIREMENTS FOR ISOLATION AND LABELING OF THE WASTE MATERIAL.
- 4. CISTERN TO BE DRAINED TO LESS THAN 12" REMAINING WATER DEPTH BY HATCHERY STAFF AHEAD OF CONSTRUCTION.
- WORK ON PIPELINE MODIFICATIONS SHOWN CANNOT PROCEED UNTIL HATCHERY STAFF INDICATES WATER FLOW TO REARING BUILDING CAN BE CURTAILED.
- 6. ABANDONMENT OF CISTERN STRUCTURE TO BE HANDLED BY OWNER.
- 7. EXCAVATIONS OCCUR IN GIANT SPRINGS STATE PARK ENVIRONMENT, RATHER THAN HATCHERY PROPERTY. CONTRACTOR SHALL PERFORM WORK WHILE LIMITING DISRUPTION TO PARK FACILITIES -- CONSTRUCTION LIMITS SHALL BE 50' X 50' AREA. PUBLIC RESTROOM MAY BE TEMPORARILY CLOSED DURING CONSTRUCTION OF PIPING MODIFICATIONS -- CONTRACTOR MUST GIVE GIANT SPRINGS STATE PARK A MINIMUM OF 7 DAYS ADVANCE WRITTEN NOTICE PRIOR TO CLOSING RESTROOM.
- 8. FULL SURFACE RESTORATION TO PRE-PROJECT CONDITIONS IS REQUIRED AFTER PIPING MODIFICATIONS -- INCLUDING PLANTINGS AND SOD, EXISTING IRRIGATION SPRINKLERS, CONCRETE & ROCK WORK, AND PARK AESTHETIC TREATMENTS.

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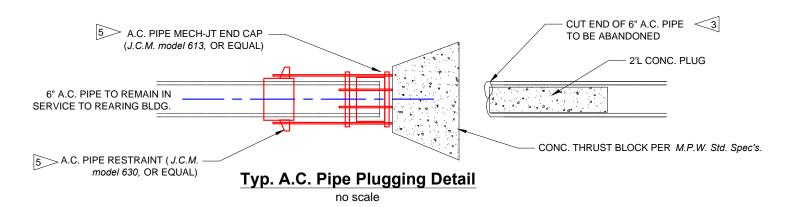
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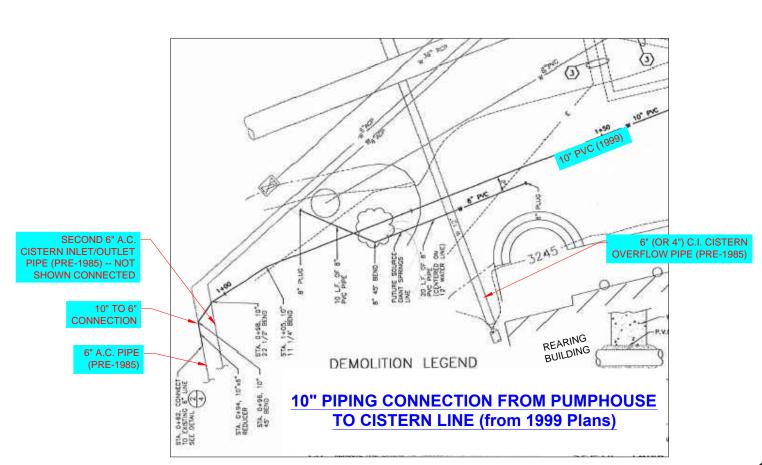
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- WORK ON PIPELINE MODIFICATIONS SHOWN CANNOT PROCEED UNTIL HATCHERY STAFF INDICATES WATER FLOW TO REARING BUILDING CAN BE CURTAILED.
- COAL TAR COAT & POLY-WRAP ALL BURIED METAL COUPLINGS & ACCESSORIES

NOTES:

- EXCAVATIONS OCCUR IN GIANT SPRINGS STATE PARK ENVIRONMENT, RATHER THAN HATCHERY PROPERTY. CONTRACTOR SHALL PERFORM WORK WHILE LIMITING DISRUPTION TO PARK FACILITIES -- CONSTRUCTION LIMITS SHALL BE 50' X 50' AREA. PUBLIC RESTROOM MAY BE CLOSED DURING CONSTRUCTION OF PIPING MODIFICATIONS -- PROVIDE GIANT SPRINGS STATE PARK A MINIMUM OF 7 DAYS ADVANCE WRITTEN NOTICE BEFORE CLOSING RESTROOM.
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L'PVI O'UB LE - 218

HATCHERY

REARING BUILDING PIPING CONNECTIONS

TO/FROM CISTERN (from 1985 Plans)

REARING

BLDG. (1985)

PACKED COLUMN

6" (OR 4") C.I.

PIPE (PRE-1985)

CISTERN OVERFLOW

AERATOR

SHE ENST FUNDHOUSE E YARD PIPMS POTAL OIL IO

SHE PROPER

THRUST BLOCKING

Wat THE

FAU PLO

DUAL 6" A.C PIPES (PRE-1985)

COLUMN INLET

LOCATE, VERIFY, CUT &

CAP EXIST. 6" A.C. LINE

SOUTH (W/IN 3 LF) OF

COL. INLET BRANCH

LOCATE, VERIFY, CUT

DIRECTLY SOUTH (W/IN

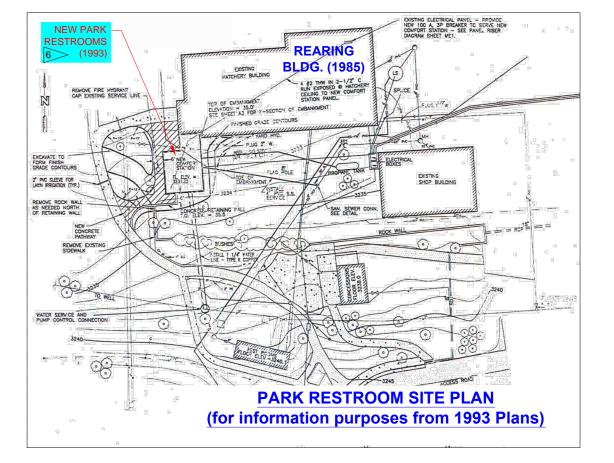
3 LF) OF EXIST. TEE TO

4" BLDG. WATERLINE

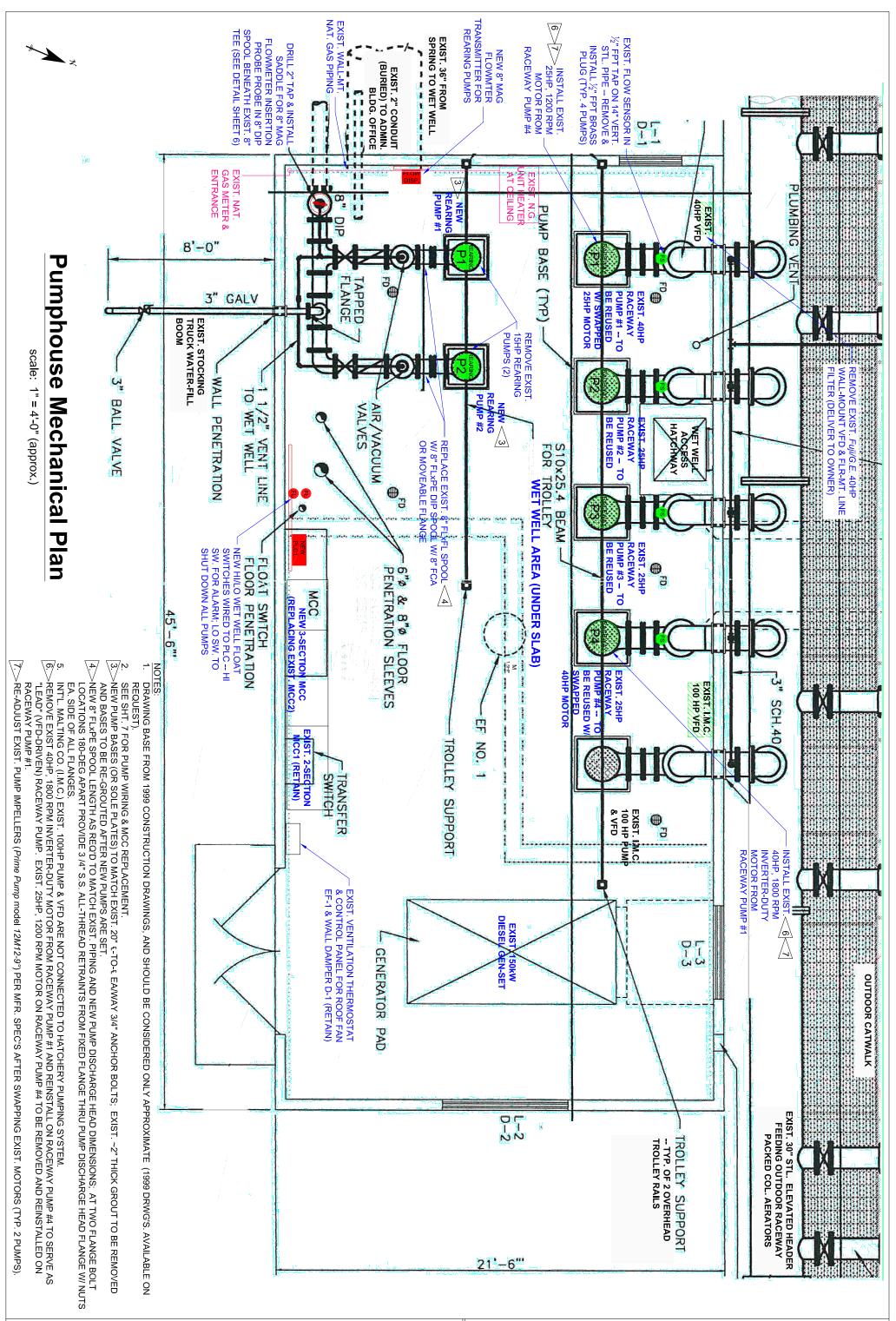
& CAP EXIST. 6" A.C. **LINE TO CISTERN**

EXIST. TEE TO PACKED

TO CISTERN DIRECTLY _ #-ACP -PW -



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Giant Springs Trout Hatchery
Pump & Control Project
PUMPHOUSE MECHANICAL PLAN

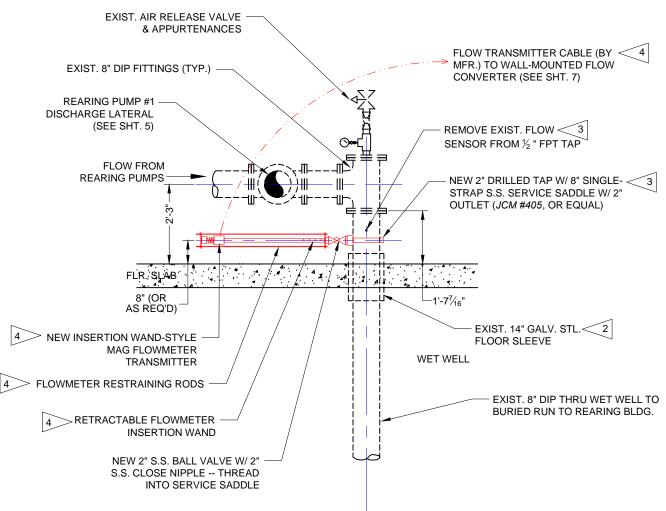
designed: Alden G. Beard. P.E. date: May 24, 2019

revised

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revised:



New Rearing Pump Flowmeter Mounting Detail

scale: 1/8" = 0'-1"

NOTES:

FAB'D. STL. SOLE PLATE

(BY PUMP MFR.)

- REMOVE EXIST. ~2" THICK < 8

GROUT & REPLACE AFTER

EXIST. 3/4" THREADED 8 9 ANCHOR BOLTS AT 20.0" O.C.

NEW PUMP INSTALLED

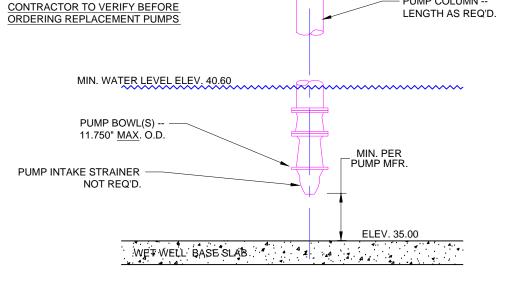
EXIST. 30" X 30" (SQUARE)

CONC. PUMP PAD

PUMP COLUMN CPLG. (TYP.)

EACH WAY (TYP. OF 4)

- . > GROUND FLOW TRANSMITTER & CONVERTER PER MFR'S. & N.E.C. REQ'TS.
- 2. CUT BACK EXIST. 14" GALV. STL. FLOOR SLEEVE IF/AS REQ'D TO MAKE TAP IN 8" DIP FOR NEW FLOW SENSOR -- DO NOT CUT SLEEVE DOWN TO FLOOR LEVEL TO AVOID ANY FLOOR RUNOFF FROM ENTERING WET WELL.
- REMOVE EXIST. *I.F.M.* FLOW SENSOR FROM EXIST. $\frac{1}{2}$ " FPT TAP & PLUG TAP WITH $\frac{1}{2}$ " BRASS MPT PLUG; ORIENT NEW PIPE TAP & SERVICE SADDLE TO AVOID INTERFERENCE WITH PLUGGED EXIST. $\frac{1}{2}$ " TAP.
- 4.> ITEMS TO BE PROVIDED AS PART OF MAG FLOWMETER BY METER MFR. -- INSTALL METER EXACTLY PER MFR'S. REQ'TS.
- 5. NEW FLOWMETER WILL READ DISCHARGE FROM REARING PUMPS IN COMBINATION, OR INDIVIDUALLY IF ONLY ONE PUMPS IS RUNNING.
- SEE SHEETS 7 & 13 FOR FLOWMETER WIRING & I/O'S TO NEW PUMPHOUSE PLC.
- EXIST. 8" FLXFL, 12"L DIP SPOOL CAN BE SHORTENED & REUSED WITH NEW F.C.A. IF IT PROVIDES SUITABLE MATCH-UP FOR NEW PUMP DISCHARGE.
- 8. CONTRACTOR IS RESPOSIBLE FOR VERIFYING EXIST. CONCRETE OPENINGS, EXIST. ANCHOR BOLT SPACING, & DISCHARGE PIPING CENTERLINE ELEVATION TO ASSURE THAT REPLACEMENT PUMP FITS OPENINGS & EXIST. BOLT PATTERN & PIPING CONNECTIONS -- DIMENSION SHOWN ARE FROM 1999 CONSTRUCTION DRAWINGS (DRAWINGS & 1999 PUMP MFR'S. RECORDS AVAILABLE ON REQUEST).
- 9. AFTER EXIST. PUMP IS PULLED, REMOVE EXIST. GROUT DOWN TO CONC. SURFACE & WIRE-BRUSH CLEAN. SUPPORT NEW PUMP ON S.S. 3/4" DOUBLE-NUTS WITH WASHERS & LEVEL PER MFR'S REQ'TS. PROVIDE INTERIOR GROUT BARRIER AROUND CONCRETE BASE OPENING & DRY-PACK NON-SHRINK GROUT TO COMPLETELY FILL UNDER PUMP BASE (SOLE PLATE). TAPER EXPOSED GROUND EDGES AT 1:1.



NEW

MOTOR

NEW

480V TO

SHT. 7)

WET WELL

MCC (SEE

ELEV. 46.00

8" FLR. SLAB

PUMP COLUMN --

CAST IRON DISCHARGE HEAD

REMOVE EXIST. 8" FLxFL, 12"L SPOOL & REPLACE W/ NEW 8" FLxPE CL 350

DIP SPOOL (LENGTH AS REQ'D) W/8"

EXIST. 8" FLANGED

EXIST. 1/4" GALV. STL. DRAIN LINE FOR PUMP

PACKING (ROUTING SHOWN IN SCHEMATIC

ONLY) -- EXTEND & RECONNECT TO

PUMPS W/ S.S. FITTINGS AS REQ'D.

8 EXIST. OPENING IN FLR. SLAB &

CONC. PUMP BASED RECORDED IN 1999 DRAWINGS AS 13.25" --

STUFFING BOX DRAIN PORT ON NEW

PILOT-OPERATED CHECK

EXIST. 8" FL GATE VALVE

VALVE W/ AIR/VAC VALVE ATOP

ELBOW AT PUMP #2)

EXIST. 8" DIP DISCHARGE

HEADER (TEE AT PUMP #1;

F.C.A. OR MOVEABLE FLANGE

New Rearing Pump Installation Section (Typ. of 2)

scale: 1/8" = 0'-1"